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ABSTRACT

This paper presents arguments for the premise that, from an instructional point of view, the most effective environmental education program is one that provides for proximity congruency (direct interaction with the natural and man-made environment) as opposed to proximity incongruency. The author suggests that if the teacher is interested in exposing the student to the real world of the life-space environment, there are several activities and experiences that can be incorporated into the instructional strategy. These include: (1) community studies, (2) field studies, (3) field trips, (4) graphic studies, (5) nature walks, (6) weekend daytrips, and (7) weekend overnight camping trips. A representative sample of environmental education information available to teachers including: films, filmstrips, games, simulations, printed materials, projects and organizations, is presented. This publication concludes by listing environmental problems that need immediate attention in environmental education programs. (BT)

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Proximity Congruency and Proximity Incongruency:

Factors Affecting the State of the Art of Environmental Education

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SE 020 891

ABOUT THE AUTHOR

Richard Peters is currently Director of an NIE funded EXPERIMENTAL SCHOOLS PROGRAM (ESP) project in northern New Hampshire . Since July 1973, Dr. Peters has supervised the development of comprehensive (K-12) instructional programs in career/vocational education, language arts, and environmental/ outdoor education .

Dr. Peters has been involved in instructional program development in the field of environmental education since 1968 . At that time, acting as an ESEA Title III Curriculum Researcher, he was responsible for the development and implementation of a grades 7-9 community exposure/awareness program for inner city students . In 1970, Dr. Peters co-authored a twelfth grade elective mini course entitled: MAN AND HIS ENVIRONMENT .

Since that time, Dr. Peters has authored an environmental education classroom simulation: THE GREEN RIVER RECREATIONAL PROJECT, published by STEM, Inc., Provo, Utah; has written published materials for the Institute for Environmental Education, Cleveland, Ohio; has written several published articles related to environmental education in the Journal of Environmental Education, Environmental Education Report, the Journal of Geography, etc.; and has recently written a published manuscript for the National Council for the Social Studies (NCSS) How To Do It series entitled: "How To Teach About Human Beings and Their Environment" . Dr. Peters has also written numerous teacher guides for ERIC clearinghouses .

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I. STATEMENT

What is mean by the term *state of the art*?

Does the term imply that environmental education is a separate - and equal - discipline of knowledge? NO! Is the reader to believe that environmental educators are masters of knowledge and wisdom - possessing cures for all our ecological ills? NO! Simply stated, *state of the art*, as used in the context of this document, means the conditional use of amassed environmental education knowledge and skills by classroom teachers - to affect student experience and learning.

II. ROLE OF THE TEACHER

Irregardless of the subject matter selected, the mode of instruction employed, or the caliber of students involved in an awareness activity - the teacher is the keystone of the educational process! It is the teacher, after all, who decides both the parameters of student learning (content) and the lattitude of their experiences (direct and vicarious); directly and indirectly imposing constraints and limitations upon student freedom (of activities) and choice (selection of experiential options).

Thus, it is the teacher who, through his/her actions and decisions, determines the congruency or incongruency of student exposure and experiences relative to environmental artifacts.[1]

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[1] Environmental artifacts: those natural and man-made elements which, when united, form the basic character and structure of a given geographical region (e.g., buildings, mountains, roads, streams).

III. PROXIMITY INCONGRUENCY

"Proximity refers to a degree of nearness; the relative distance between two or more animate or inanimate objects."[2]

If, for example, students are discussing trees and their life cycles and the trees are outside the building while the students are inside the classroom - then their exists a state of *proximity incongruency*; that is, a situation designed to physically remove environmental life space artifacts (animate or inanimate objects - including humans) one from the other or contrived to isolate and manipulate a given artifact. No logical harmony of parts (artifacts) exists in a state of proximity incongruency. (See Diagram I)

IV. PROXIMITY CONGRUENCY

In order to affect a harmony of parts (artifacts) there is a need to create a state of *proximity congruency*; that is, a situation designed to physically write environmental life space artifacts (animate and inanimate objects - including humans) for purposes of interaction. Thus, if a teacher wants students to learn about trees and their life cycles then he/she must design a learning experience whereby students leave the school - go out into the environment - and interact directly with the trees on a participatory basis (e.g., study the bark of several different types of trees - appearance and texture; scrutinize leaf colors, shapes and structure; and investigate the importance of tree shade to soil moisture and low-to-ground vegetation growth). (See Diagram II)

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[2]Richard Peters, "The Identification, Development, and Use of Community Learning Sites: A Case Study", Environmental Education Curriculum Materials Resource Center, Maine State Library, Augusta, May 1976.

V. WHAT THE TEACHER CAN DO

> *As a direct consequence of our agricultural and industrial technology, we are rapidly causing to degenerate our sole habitation, that narrow strip of soil, air and water - the biosphere - in which we live and move and have our being.*[3]

If the teacher is interested in exposing to the *real world* of the life space environment there are several activities and experiences which can be incorporated into the instructional strategy.

1. Community Studies. Small groups of students go out into the community to study life space phenomena (artifacts) and to collect relevant social data.
2. Field Studies. Opportunities for students to go out into the life space environment and to investigate phenomena/conduct research (e.g., air quality, pond life, soil composition, water pollution).
3. Field Trips. Group tours of community sites; both natural and social, for purposes of learning more about the character and nature of life space environments.
4. Graphic Studies. The use of graphic media devices by students for purposes of collecting data (e.g., motion/still pictures, video tapes). The use of graphic media devices also provides an avenue for student self-expression.

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[3] John Passmore, Man's Responsibility for Nature, Charles Scribner's Sons, New York, 1974, pg. 3.

5. Nature Walks. Opportunities to walk through specified areas of the total life space environment for purposes of better understanding nature, character and interdependence.
6. Weekend Daytrips. One day nature hikes into the more-remote areas of the life space environment.
7. Weekend Overnight Camping Trips. Opportunities for students to go out into natural settings and to experience camping-out as well as to learn/apply basic camping skills.

There is also a wealth of amassed EE information and knowledge which can be brought-to-base-on- and incorporated into instructional programs.

Films/Filmstrips

1. Air Pollution, Encyclopaedia Britannica Educational Corporation, Chicago, Illinois. (F) (9-12)
2. An Introduction to Ecology: Six Basic Systems, Eyegate House, Inc., Jamaica, New York. (FS) (4-6)
3. Discovering Life Around Us, Encyclopaedia Britannica Educational Corporation, Chicago, Illinois. (FS)
4. Man and His Resources, McGraw-Hill Films, Boston, Massachusetts. (F) (5-12)
5. Our Environment, EMC Corporation, Saint Paul, MN (FS) (4-8)

Games/Simulations

1. Air Pollution, Water Pollution and Noise Pollution, Addison - Wesley Publishing Company, Reading, MA (7-9)

2. Environmental Issues: A Courtroom Simulation, US Department of the Interior, Washington, DC. (11-12)
3. Graphigame: Environmental Attitudes, Education Ventures, Inc., Middletown, CT. (7-12)
4. Green River Recreational Project, STEM, Inc., Provo, Utah. (7-12)

Printed Materials

1. Earth Science: Patterns in Our Environment, Prentice-Hall, Englewood Cliffs, New Jersey.
2. Field Trips: Ecology for Youth Leaders, Burgess Publishing Company, Minneapolis, Minnesota.
3. Handbook of Environmental Education Strategies, The State Education Department, Albany, New York.
4. How You Can Relate Your School to the Total Community Environment, Maine EE Project, Yarmouth, Maine.

Projects and Organizations

1. Conservation Education Association, P.O. Box 450, Madison, Wisconsin 53701.
2. Ecology Action Education Institute, Box 3895, Modesto, California 95352.
3. Institute for Environmental Education, 2785 Som Center Road, Chagrin Falls, Ohio 44022.
4. Maine Environmental Education Project, Yarmouth, Maine 04096.
5. National Wildlife Federation, 1412 - 16th Street, N.W., Washington, DC 20036.

6. Project ECOS, 845 Fox Meadow Road, Yorktown Heights, New York 10598.

7. Society for Environmental Stabilization, P.O. Box 252, Fayetteville, Arkansas 72701.

8. The Wilderness Society, 729 - 15th Street, N.W., Washington, DC 20005[4]

VI. ENVIRONMENTAL EDUCATION

Environmental education programs should attempt to develop and affect the individual's attitudes about and concern for the state of the environment. This task can be accomplished by focusing attention on those problems which directly affect both the quality and role of human being's environment in the totality of an ecological community. Environmental education programs which focus on student attitudes toward the environment with an emphasis on outdoor activities, utilizing natural and social community environments as learning laboratories, are probably more effective than most programs. Attention should be given to two general areas of environmental problems:

1. *Problems of the natural, physical environment involving aesthetic and physical qualities as well as the quantity of natural resources:*
   a. *air pollution.*
   b. *mining of natural resources.*
   c. *open space for recreation and wildlife.*
   d. *plant and wildlife disease.*
   e. *water pollution.*

2. *Problems of human-made environments:*
   a. *air pollution.*
   b. *noise pollution.*
   c. *water pollution.*
   d. *population growth and distribution.*
   e. *community services.*
   f. *traffic congestion.*
   g. *litter and solid waste disposal.*[5]

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[4] The lists of materials and organizations included in this document represent only a sample of available items and reference groups.

[5] Richard Peters, "How to Teach About Human Beings and Their Environment", NCSS How To Do It Series, National Council for the Social Studies, Washington, DC, 1976, pg. 2.

In order for students to investigate both the problems of natural and man-made environments - they must be taken out into those settings and allowed to directly interact with them.

The most effective EE program, from an instructional point-of-view, is the one that provides for - and encourages *proximity congruency*. It is the most-logical - the only state of harmony that can be permitted to exist in the state of the art of environmental education.

A state of proximity incongruency is characterized by a pulling-apart; a spparation of environmental artifacts (be they animate or inanimate objects). There is a tendancy for objects to repel or to move (be moved) away from one another. This outward movement away from an object or away from each other results in a widening of the distance - thus a lessening of nearness (negative proximity).

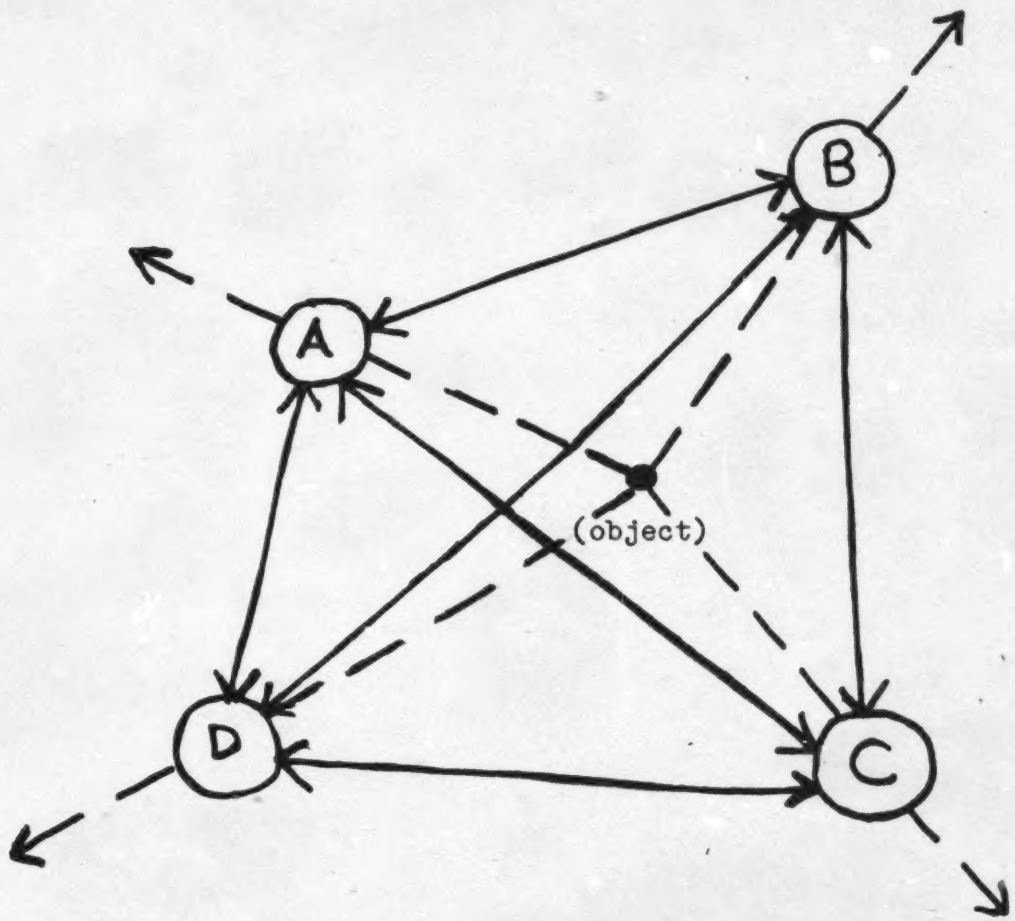

DIAGRAM I. PROXIMITY INCONGRUENCY MODEL

A state of proximity congruency is characterized by a bringing together; a uniting, of environmental artifacts (be they animate or inanimate objects). There is a tendency for objects to move (be moved) inward toward one another or toward a central object. This inward movement results in a closing of the distance - thus greater nearness (positive proximity).

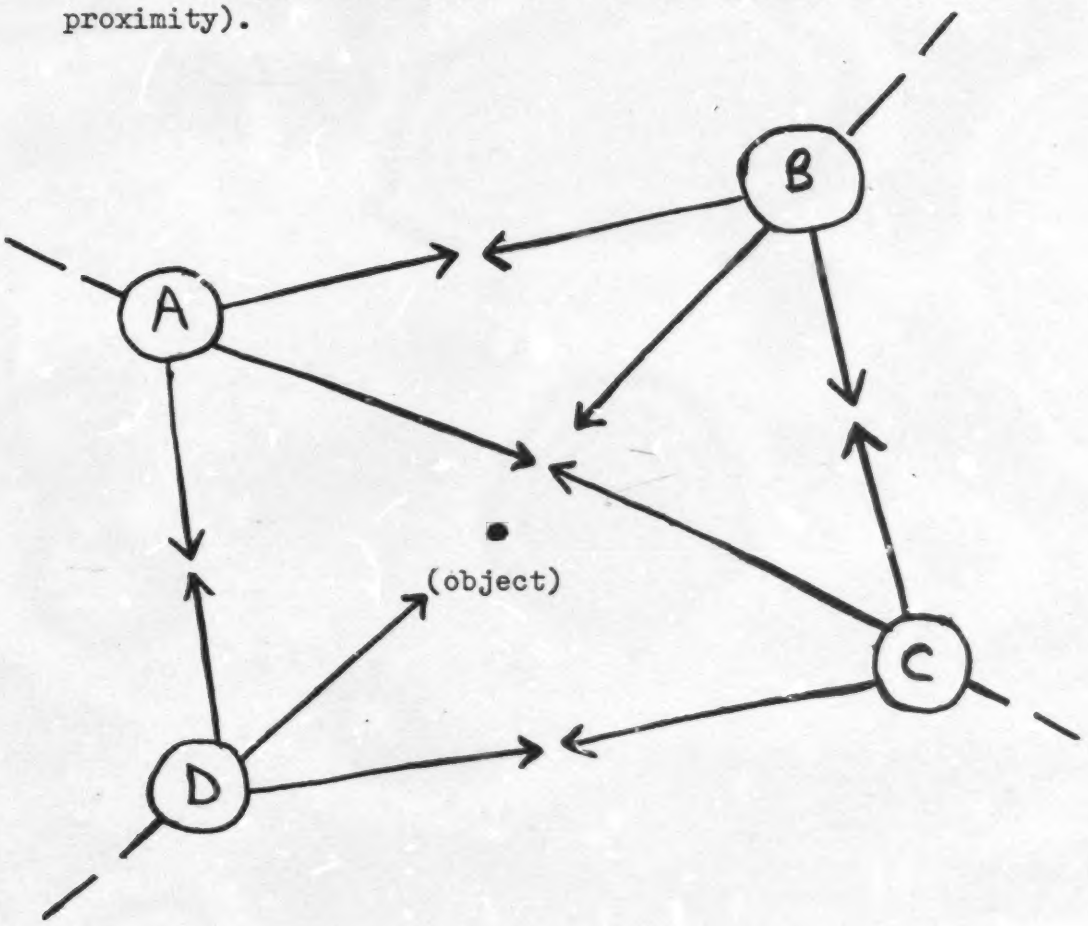

DIAGRAM II. PROXIMITY CONGHEENCY MODEL